Shifting to ***SOIL*** Biology

An Agronomy and Range Tour

- Maximize profits and improve resiliency in both cropland and rangeland by integrating traditional agronomy with a new understanding of soil biology.

August 30th & 31st 2016

Fallon County Fairgrounds • Baker, MT

Take your agriculture production to the next level!

USDA NRCS Natural Resources Conservation Service Montana

Montana Soil and Water Conservation Society

Little Beaver Conservation District

MONTANA STATE UNIVERSITY EXTENSION 1914 2014 100 across generations across Montana

USDA United States Department of Agriculture Farm Service Agency

USDA is an equal opportunity employer and provider.

Join us for a 2 day event covering these topics:

Are your soil tests telling you the whole story?

Transitioning to no-till, cover crops, and continuous crops

Understand how microbes & insect populations affect you

Are you preventing your soil from reaching it's potential?

Utilizing intensive grazing, large capacity water systems & bale grazing

Ecosystems and Prairie birds

How soil is one of your most valuable assets

AND MANY MORE!

For more info contact **Little Beaver Conservation District or NRCS : (406) 778-2238 x 3**

email: littlebeavercd@macdnet.org ***Visit us at littlebeavercd.com or find us on FACEBOOK for tour updates***

Shifting to Soil Biology

Range and Agronomy Workshop

August 30th

8:00-8:45 am	Registration at Fallon County Fairgrounds
9:00 am	Load Buses at Fallon County Fairgrounds
10:00 am	Arrive at Burdick Ranch– Background of operation by Burdick Family
	Featuring Speakers:
	Randy Pierce, MRCS SO Engineer– on hand to discuss the moisture sensor data on cover crops versus corn
	Dr. Will Brinton, Founder of Woods End Soil Labs– will perform a Solvita demonstration and discuss soil CO2 and plant health/growth and productivity
	Hayes Goosey, MSU Entomologist– dung beetles and insect populations
12:00 pm	LUNCH– Picnic style lunch will be provided
1:30 pm	Load Buses
3:00 pm	Arrive at Fairgrounds for speaker discussions on plant response to CO2 and soil nutrients & management techniques that result in desired production changes.
	Featuring Speakers:
	Dr. Will Brinton, PhD, Environmental Scientist and found of Woods End Soil Labs in Mount Vernon, Maine
	Jay Fuhrer, Soil Heath Specialist, Bismarck, ND –Identifying areas with a risk of declining production and alternatives to address these risk factors
5:00 pm	Social
	*** SPECIAL*** Compositing discussion by Dr. Brinton & Jay Fuhrer

August 31st

8:00 am	Registration at Fallon County Fairgrounds
8:30 am	Load Buses at Fallon County Fairgrounds
9:30 am	Arrive Hayden Ranch– Background of operation by Hayden Family
	Featuring Speakers:
	Elin Kittlemann, Fallon/Carter County Extension Agent— "Managing for Soil Health is like Managing for Rumen Health"
	Dr. Will Brinton, Founder of Woods End Soil Labs
	Heather Nenninger, Range and Wildlife Conservationist NRCS/MACD—prairie birds and their ecosystems
12:00 pm	LUNCH– Picnic style lunch will be provided
12:30 pm	Jay Fuhrer– How what we have seen/heard can change how we operate farms and ranches
2:00 pm	Load Buses
3:00 pm	Arrive at Fairgrounds—Closing

Shifting to Soil Biology

Ranch Bios

Burdick Ranch

We will have the opportunity to listen to a family farm/ranch operation that transitioned from a hoe drill with wheat and chemical fallow to a disk drill with a rotation that includes corn and cover crops, all while integrating livestock. Discussion will include the process of getting where they are today, the immense learning curve, what crops work well for them, moisture management, changes in organic matter, electric fencing, flexibility of the operation and wildlife populations.

Hayden Ranch

We started our ranch in 1979, but since Dave was very young he had been working the original Roy Johnson place, which started in 1913. Our ranch's current focus is - using cattle as a tool to create healthy soil on range land. In the beginning years we tried many different practices such as sheep, cash crops and more! Dave has always been interested in grasses, and in 1988 we put in our first rotational grazing system and started seeing challenges that needed to be overcome. So in 2009 Dave attended his first Holistic Management seminar at the Durham Ranch in Wright, WY. After that seminar he realized the benefits of MIG and the need to get this system up and running 110% on our ranch, and with Dave that means top priority.

Dave and Deanna with their 2 daughters, 1 son and 6 grandchildren under the age of 4, and Chase and Deborah with their baby girl.

This ranch management has gone from conventional grazing to MIG (Management Intense Grazing), then to twice over rotation and back to MIG. They have adopted a holistic approach to their ranch and are integrating their grazing with soil health knowledge and monitoring to increase forage production and system health which have both improved their economics and overall biodiversity of their ranch. Discussion will include; winter grazing, intensive livestock rotation, large capacity water systems, bale grazing, the barriers that are to be overcome, dung beetles and soil health monitoring.

Shifting to Soil Biology

Speaker Bios

Dr. Will Brinton, Ph.D., an environmental scientist and founder of Woods End Soil Laboratory in Mount Vernon, Maine is an internationally known consultant and researcher in the field of agriculture. Brinton studied microbiological and agricultural sciences in Pennsylvania, Maine, England, Germany and Sweden and worked under the direction of Nobel Laureate Albert Schatz, the co-discoverer of the antibiotic streptomycin. Brinton earned degrees in agronomy and soil and plant science and was awarded his doctorate in environmental science for groundbreaking research on organic acid cycles in soils and composts.
Brinton has published more than 35 scientific papers on soil, compost, methane generation and horticultural topics. His current focus is on improving soil testing to include biological along with chemical and physical test parameters. Dr. Brinton is also the inventor of Solvita.

Jay Fuhrer is a Conservationist employed by the Natural Resources Conservation Service, in Bismarck, ND. Jay emphasizes Soil Health as a foundation for cropping systems, grazing systems, cover crops, soil biology, pollinators, insects, wildlife, and quality of life. In addition, Jay uses cover crops and livestock integration to connect the cropping and grazing systems together, raising the soil health bar even higher.

Hayes Goosey is a Research Assistant Professor with the Department of Animal and Range Sciences at Montana State University. His research integrates entomology with ecology, production agriculture, wildlife, natural resource conservation, and disease vectors across a diversified Montana landscape. In recent years, Dr. Goosey has been investigating rangeland grazing strategies as they relate to pollinator, dung beetle, and upland bird conservation through research and education programs aimed at understanding the economic importance Arthropods play in profitable and sustainable agriculture operations. He can often be found talking with anyone who will listen to him about insects and their importance.

Heather Nenninger -Originally from Olalla, Washington, Heather studied wildlife biology at the University of Montana. Following her graduation in 2011, she worked for several months during 2011 and 2012 in NE Montana on projects studying grassland songbirds and later sage-grouse. Heather then attended the University of Manitoba in Winnipeg, where her research examined the effects of oil infrastructure on grassland songbirds for her Masters degree. For the past year she has worked in Forsyth, Montana as the Sage Grouse Initiative's Range and Wildlife Conservationist.

Elin Kittelmann, Fallon/Carter County Extension Agent, received her Master's Degree from Colorado State University in Ruminant Nutrition and a bachelor's degree from Michigan State University in Animal Science.

Randy Pierce is an Irrigation/Water management Engineering for the NRCS, with a career lasting over 33 years, 9 years as a Technician, and over 24 years as an Engineer after graduating from MSU. Pierce mostly worked on irrigation systems from flood, to sprinkler to micro irrigation. Since becoming Irrigation/Water management Engineer he has focused on water management and the benefits to soil and plants using available water. Randy also irrigates hay fields and high tunnels where water management tools and practices are used. Tensiometers are used in the high tunnel and helped set timing and irrigation amounts without over irrigation. Soil moisture sensors are used in the hayfield and have helped reduce one irrigation per season. Pierce has also been instrumental in expanding soil moisture sensors to non-irrigated areas.

Shifting to Soil Biology

Range and Agronomy Workshop

Accommodations:

Red River Inn and Suites
410 W Montana Ave
Baker, MT 59313
(406) 778-3321

Sagebrush Inn
518 W Montana Ave
Baker, MT 59313
(406) 778-3341

Montana Motel
716 East Montana Avenue
Baker, MT 59313
(406)778-3315

"It's not the soil itself, it's the soil life that is the most important element."
~ Geoff Lawton

NRCS provides reasonable accommodations for all persons with disabilities to participate in NRCS programs and activities. If you require special accommodations, please contact Ann Fischer at (406) 778-2238 x 109 by August 10th, 2016.

Feel free to call with any questions: **Little Beaver Conservation District or NRCS (406) 778-2238 x 3**

email: littlebeavercd@macdnet.org

** Visit us at littlebeavercd.com or find us on FACEBOOK for tour updates **

Registration Due Before August 15th

Name or Ranch Name: _____

Address: _____

Email: _____

Registration Fee: ☐ $35.00/ one day ☐ $60.00/ both days ☐ $150.00/ Ranch family (up to 4 people)

Special Dietary Restrictions: _____

Please make check payable to **Little Beaver Conservation District** and mail payment and form to:

Little Beaver Conservation District

PO Box 917

Baker, MT 59313